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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,082	10/10/2001	Katsuhiro Ishii	110671	4514

7590

12/15/2004

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EXAMINER

CHERUBIN, YVESTE GILBERTE

ART UNIT	PAPER NUMBER
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3713

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/937,082	ISHII, KATSUHIRO cn	
	Examiner	Art Unit	
	Yveste G. Cherubin	3713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/21/2001, 6/26/02</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the amendment filed July 29, 2004. Claims 1-18 have been amended. Thus claims 1-27 are pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 8-9, 17-18, 26-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 8, 17, 26 recite the limitation "each discrete frame" inline 3. There is insufficient antecedent basis for this limitation in the claim.

Claims 9, 18, 27 recite the limitation "the K-th object, the L-th object and the (N+1)th frame" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 10-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Since both a signal and a carrier wave are disturbances of matter and not matter itself, they certainly cannot form a "composition of matter."

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Because a manufacture also requires some tangible physical matter, a signal on a carrier wave cannot be a manufacture. Thus a signal, and even one embodied in a carrier wave, is deemed not to fall within one of the four categories of subject matter enumerated in 35 U.S.C. 101 that is eligible for a patent.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 10, 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Lentz (US Patent No. 5,649,173)

Regarding claims 1, 10, 19, Lentz discloses an image generation and manipulation system. Lentz further his system comprising a memory (17) which stores a program and data for image generation, and at least one processor (15) which is connected to the memory and performs processing for image generating, the processor capable of comprising a double buffer of the image being, see abstract, 5:12-16.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

a. Claims 2-3, 8-9, 11-12, 17-18, 20-21, 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lentz in view of Obata (US Patent No. 5,280,568).

Regarding claims 2, 11, 20 Lentz discloses the claimed invention as substantially as shown above. Lentz further discloses drawing primitive surface, 2:66-67, 3:1-6. However, Lentz fails to elaborate on the drawing positions being specified based on three-dimensional information of the object and on which the image of the geometry-processed object drawn in the intermediate buffer is texture-mapped. Obata teaches the method and apparatus for drawing a surface model by assigning a drawing priority to each primitive surface model, which provides a portion of the surface model, see title. Obata further teaches providing drawing positions base on information of the object. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the feature cited above as taught by Obata into the system of Lentz in order to ensure the smooth operation of the system.

Regarding claims 3, 12, 21 Obata further teaches the buffer performing hidden-surface removal between the primitive surfaces based on the depth values of the respective primitive surfaces, 2:42-60, 14:1-11.

Regarding claims 8, 17, 26 Obata teaches the buffer drawing section drawing the image of the geometry-processed in the intermediate buffer for each discrete frame, 8:1-38.

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Regarding claims 9, 18, 27, Lentz teaches drawing image at the n-th frame and drawing the image of the l-th object in the intermediate buffer at the (n+1)th frame without drawing the image of the k-th object, 11:32-67.

b. Claims 4, 6-7, 13, 15-16, 22, 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over in view of Lentz and Obata and further in view of Kobayashi et al. (US Patent No. 6,034,693).

Regarding claims 4, 13, 22 Lentz in view of Obata disclose the claimed invention as substantially as explained above. Lentz in view of Obata fails to disclose making images texture-mapped over the plurality of primitive surfaces different from one another. Kobayashi teaches an image synthesizing apparatus enable to make images texture-mapped over the plurality of primitive surfaces different from one another, 1:65-67, 2:1-10. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the feature cited above by Kobayashi into the Lentz in view of Obata type system in order to provide a real time operation in which image quality is enhanced.

Regarding claims 6, 15, 24, Kobayashi teaches an image synthesizing section which synthesizes an image drawn in a buffer at a present frame with another image drawn in said buffer at a past frame before the image drawn in said buffer is drawn in the frame buffer, 5:13-43.

Regarding claims 7, 16, 25 Kobayashi further teaches an image synthesizing section which synthesizes an image drawn in the intermediate buffer with another image drawn

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in the frame buffer before the image drawn in the intermediate buffer is drawn in the frame buffer, 5:13-43.

c. Claims 5, 14, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lentz in view of Kurtze et al. (US Patent No. 6,198,477) .

Regarding claims 5, 14, 23 Lentz discloses the claimed invention as substantially as shown above. Lentz fails to disclose a given image effect processing on the image on the intermediate buffer before the image drawn in the intermediate buffer drawn in the frame buffer. Kurtz teaches an image processing system capable of providing a given image effect processing on the image on the intermediate buffer before the image drawn in the intermediate buffer drawn in the frame buffer, 20:33-49. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the feature cited above as taught by Kurtz into the Lentz type system in order to generate realistic images.

Response to Arguments

6. Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yveste G. Cherubin whose telephone number is (571) 272-4434. The examiner can normally be reached on 9:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Xuan can be reached on (571) 272-7147. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ygc



XUAN M. THAI
PRIMARY EXAMINER

AM 3713